

Canadian ARMY Journal



VOL. XIV NO 5

JANUARY 1960



CANADIAN ARMY JOURNAL

The aim of the Canadian Army Journal, which is published quarterly by the Directorate of Military Training under authority of the Chief of the General Staff, is to provide officers of the Canadian Army with information designed to keep them abreast of current military trends, and to stimulate interest in military affairs. The views expressed by authors are not necessarily those of the Department of National Defence.

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THE NUCLEAR WEAPON AND THE SOLDIER

By

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This is an essay entered by the author in The Bertrand Stewart Prize Essay, 1959, competition sponsored by The Army Quarterly and Defence Journal (United Kingdom). It is published by permission of the Editor of that publication.

Subject of the essay was:

"As a nation we have to be prepared for cold war, limited war and global war. In each case the individual soldier is the same, and in one if not two of the cases we will be involved in an exchange of nuclear weapons. Though we have always had training problems in preparing men for warfare in environments different from their own, the preparation of the soldier for the unknown quality of nuclear war will be an infinitely greater problem than equipping the townsman for the jungle. It is likely to need psychology as well as military instruction.

"Moreover, recently it has been said that some of our methods are out of date (e.g. drill to instil discipline) as a different kind of soldier will be needed on the nuclear battlefield.

"Discuss these problems from the Regimental officer's point of view and give your views as to how they can best be met."—Editor.

Introduction

"It is of immense importance that the soldier, high or low, whatever be his rank, should not see for the first time in war those phenomena of war which when seen for the first time, astonish and perplex him."¹

Some fourteen years ago when nuclear fission first became a weapon of war its tremendous explosive power began at once to influence our military thinking. Defence concepts were quickly revised to include the impact of this new and revolutionary weapon and, when it was realized that thousands of tons of ordinary high explosive were re-

quired to match the destruction caused by the single bombs at Hiroshima and Nagasaki, the nuclear weapon suddenly became the dominant factor in every assessment of future war.

The development of the weapon has, of course, been phenomenal: warhead yields, in terms of high explosives, now range from one to over one hundred kilotons, and delivery systems now include jet-powered aircraft, nuclear cannon, and rockets and guided missiles. In fact, the technical achievements of modern science in preparation for nuclear warfare have been so dazzling that the personal requirements of the lowly soldier have been somewhat overlooked.

The soldier of today knows a good

¹*On War* by General Karl Von Clausewitz. Translated by O. J. Matthijs Jolles. Copyright 1943, Random House Incorporated, p. 56.

This is the author's fourth major work on modern war since 1955, all of which have been published in the *Journal*. The previous articles are:

Guns and Guided Missiles (April 1955 issue), in which the writer maintained that even in the "push-button" era guns were still required and that guns and guided missiles were complementary—a fact which, he declares, still obtains.

The Age of Nuclear Gunners (July 1957 issue), which emphasized the importance of artillery taking hold of the nuclear weapon and treating it just like any other gunner weapon.

The Nuclear Battle Group (April 1959 issue), which stressed the importance of maintaining the delivery system and its warhead secure in modern battle, whether the nuclear weapon is used or not.—*Editor*.

deal about conventional warfare, either from his own experiences or from the teachings of war-tested veterans, and he is quite capable of looking after himself on the conventional battlefield; however, he knows little or nothing about nuclear warfare. This is due, not only to the obvious complete absence of nuclear battle experience but also to the somewhat unrealistic approach which has been taken to the problem of nuclear training.

This paper discusses the indoctrination and training of soldiers for nuclear warfare, and seeks to find a way, within the bounds of safety and economy, by which soldiers can be better prepared both physically and mentally for the conditions that await them on the nuclear battlefield.

Pattern of Future Warfare

A prerequisite, before any programme of indoctrination can be commenced, is to establish the probable pattern of future war. This has been very difficult to fix definitely because ideas about the conduct of war have changed, during the past decade, almost as often as an im-

provement to the nuclear weapon has been announced or as the stockpile of nuclear warheads has been increased.

In the immediate post-war period, for instance, the popular theory was that the Hiroshima-type bomb was entirely too devastating ever to be used tactically on the battlefield, whereas, because of its success against industrial targets in Japan, it could be employed as a strategical weapon. The tactical battlefield was visualized as being very similar to that of the Second World War wherein conventional forces of Second World War design and quantity would still be required.

This theory of limited employment of the nuclear weapon soon gave way to one which advocated its mass use tactically on the battlefield. This complete *volte-face* occurred, partly because it became known that the United States, in stockpiling the weapon, had reached a state of so-called "nuclear plenty" and partly because, in the planning for the defence of Western Europe, it was realized that the forces of the Western Powers were entirely inadequate to stem the Soviet tide. To com-

pensate for the lack of conventional forces, therefore, it was publicly announced that nuclear weapons would be used in quantity, both tactically and strategically.

The theory of the mass use of nuclear weapons could be postulated with equanimity by the Western Powers as long as the United States maintained an advantage in the possession of these weapons, because the fear of nuclear retaliation was negligible. However, when it became known that the Soviet Bloc was just as advanced in the development, testing and production of nuclear weapons as were the Western Powers, a new pattern of future war had to be conceived.

In an attempt to establish a new pattern of future war, several alternative concepts seemed to suggest themselves. Of these, one which is gaining increasing popularity at the moment is that a nuclear stalemate is now in being in that both sides apparently have decided not to risk nuclear obliteration by being the first to employ the weapon, regardless of the urgency of national desires. If nuclear stalemate is, in fact, a reality, the pattern of war will not have changed from that of the past; the absence of nuclear weapons will enforce the continued employment of large conventional forces.

The same conditions would obtain in the limited wars which occur on the peripheries of the Great Powers, since these are apparently considered as being neither sufficiently large nor important to warrant the use of nuclear weapons and so risk a catastrophic all-out nuclear war. Limited wars, therefore, will probably continue to be fought by conventional forces without the benefit of nuclear weapons.

A further concept, which has been receiving widespread attention of late, is a condition known as tactical nuclear warfare. This theory sees each side, to avoid nuclear annihilation, coincidentally deciding to confine the nuclear weapon solely to the battlefield and to avoid employing it on strategical targets in the homelands. The concept visualizes mobile nuclear battle groups, consisting of conventional forces of all arms, nuclear delivery systems, and an allotment of low-yield warheads, attempting to manoeuvre the enemy into nuclear targets while at the same time avoiding the making of a target for his weapons. This seems to be a reasonable appreciation of the conduct of future war provided that the nuclear weapon can really be confined to the battlefield. With the low-yield tactical nuclear warheads which are now being developed this may be possible, but the difficulty in maintaining a clear division between tactical targets and strategical targets may prove this concept's undoing.

Finally, of course, there is the full-scale nuclear war, triggered intentionally or unintentionally, regardless of any previous resolutions. This is pictured as commencing with long-range ballistic missile duels in which quantities of high-yield nuclear warheads are directed against the war-making potential of the homelands. The initial phase would continue as long as the stocks of high-yield nuclear warheads endure and, if the will to fight still persists, would be followed by land battles for possession of terrain. In the latter, conventional forces equipped with low-yield tactical nuclear weapons form nuclear battle groups and operate in a manner similar to that already described.

Notwithstanding the above and despite the fervent desires of all concerned, an absolute ban on the employment of nuclear weapons can probably never be guaranteed. This will be particularly true when additional allied and satellite countries come into possession of the weapon because, by a mere miscalculation or in a desperate attempt to survive, one country could with one act envelop the world in nuclear war. It appears, therefore, that we have no recourse but to plan for the worst case — a war in which nuclear weapons are employed — and to organize, equip and train our military forces to this end. At the same time, of course, we must retain the art and resources necessary to wage conventional war, in the event that the non-use of nuclear weapons can be sustained. If these two requirements are met, our military forces should be able to cope with any emergency.

Nuclear Battlefield

Before realistic training for nuclear war can be undertaken, it is necessary to forecast the conditions which our forces are likely to encounter on the nuclear battlefield. This cannot be done with any degree of certainty because of the absence of nuclear battle experience. Much that is real can be established, however, if alert and imaginative minds peer into the future and superimposing the known effects of the weapon upon a typical conventional battlefield, emerge with a reasonable picture of the nuclear conditions that might be expected.

The effects of the nuclear weapon are, by this time, quite well known, data from the Japanese blasts and from subsequent tests and laboratory experiments having been tab-

ulated and recorded in some excellent publications and films. However, if the worth of these instructional aids is to be realized fully, they must be interpreted with a vivid and practical imagination. Only then will soldiers be able to appreciate the enormity of a nuclear explosion without being overawed by the weapon itself.

Some far-seeing military men have attempted to interpret the effects of the weapon and to forecast the conditions on the battlefields of the future and of these, Lieutenant-Colonel Robert B. Rigg of the United States Army is one of the most imaginative. A paraphrase of one of his vivid descriptions follows:

"The rending impact sheared off the turrets of twenty-six tanks, shredded the bodies of the commanders and loaders, and tore off the heads of gunners. The drivers survived in a sense, but with their eyes glued to their periscopes they were permanently blinded.

"Before you could bring order out of confusion and chaos you were desperately sick and vomiting so your half-reorganized command passed to a Sergeant. He lived to be thrice decorated—only to be buried on the fifth day, half bald.

"Further back, infantrymen were buffeted by the blast like puppets picked up by a drunken master. Some soldiers had suddenly become sightless.

"The blinded infantrymen in panic, shock and hatred of the enemy began to fire their weapons with hopeless abandon and, lacking all sense of direction, began to wound and kill their seeing comrades.

"On the outermost fringes of the blast officers saw their dazed men lie motionless and frightened—paralyzed from mental panic. It took

an hour of urging, cursing and coercing to bring the men to their senses."²

Rigg's description of the nuclear battlefield is indeed frightening, but it may be close to the truth, considering the known effects of the weapon. In all probability the casualty rate will always be high in the immediate vicinity of ground zero, because it does not seem likely that adequate protection can be provided there. Protective measures to escape the full force of the weapon can be adopted, however, by those who are further from the point of burst. It is important to realize that soldiers who are exposed to the weapon's effects have an excellent chance of recovery if prompt and efficient treatment is administered; in any event, if they are well disciplined and have been properly prepared for nuclear warfare, they will not be subject to the shock and panic of Rigg's infantrymen.

To summarize, therefore, it is evident that, in preparing for nuclear warfare, the importance of the ordinary soldier and his conventional weapons must not be overlooked. If the soldier is to remain effective in the chaotic aftermath of the nuclear weapon, he must be thoroughly conditioned beforehand for the sights and sounds which he is expected to face.

Effects of Nuclear Weapons

A good deal has been said during the last few years about the phenomena of nuclear explosions and their effects upon humans, but not much has been done to provide the material means of combatting these effects. True, unit and formation

tactics have emphasized greater dispersion and mobility to avoid creating nuclear targets; field equipment has been developed for the detection of nuclear radiation; and soldiers have witnessed test explosions in the Nevada Desert and the Pacific Atolls. Despite these achievements, however, little progress has been made in the development of those protective measures which are necessary for the survival of the soldier himself.

In recent large-scale summer exercises, for instance, when both sides have been given a nuclear potential, soldiers have been allowed to remove their shirts, oblivious of the fact that every barebacked soldier within 2500 metres of a twenty-kiloton low airburst nuclear weapon would have been a fatal casualty.

As proof of the disastrous effects on exposed flesh of the direct heat rays of a nuclear explosion, the following is paraphrased from eyewitness accounts at Hiroshima of the first nuclear weapon:

"The first thing I knew, there was a blinding flash of light, and a wave of intense heat struck my cheek; in the next instant there was a tremendous blast. The force of it knocked me clean over. The sight of the soldiers was dreadful. I came onto I don't know how many, burned from the hips up; and where the skin had peeled their flesh was wet and mushy. They must have been wearing their military caps because the black hair on the top of their heads had not been burned. I wonder if they didn't have their coats off when the bomb exploded.

"And they had no faces! Their eyes, noses and mouths had been burned away, and it looked like their ears had melted off. It was hard to tell front from back. One soldier,

²*Broken-back Battle* by Lieutenant Colonel Robert B. Rigg, February 1958 issue of *Army*, the magazine of the Association of the United States Army.

whose features had been destroyed [and] was left with his white teeth sticking out, asked me for some water" ³

This unpleasant picture emphasizes vividly the severity of casualties when men are unprepared, unwarned and unprotected. Tests have proven, however, that such casualties can be reduced immeasurably by the introduction of realistic nuclear indoctrination and training programmes and by the adoption of some simple protective measures. To support this contention, the effects of a nuclear weapon in chronological sequence from the instant of the explosion, and some of the measures to combat these effects are discussed below.

Flash—The first effect to occur is an intense flash of light which blinds temporarily all those within a certain radius who happen to be looking towards it. The degree of blindness will vary with the proximity of the explosion and will be more serious at night or on a dull day, when the retina of the eye is enlarged. Blindness may even be permanent if the explosion happens to be seen through an optical instrument.

Flash blindness, because it is only temporary in the majority of cases, is not serious in itself; it is the resulting fear and depression which can be disastrous. Soldiers must be thoroughly briefed beforehand as to what to expect and, if they are, in addition, well disciplined, they will be constrained to remain calm and under control until their vision returns to normalcy. Chaos will result if control of them is lost.

An efficient shield to protect the

eyes against flash blindness is required, but the problem is to find an opaque substance which will deflect the nuclear flash and, at the same time, allow sufficient normal vision. A possible solution might be a type of non-flammable face mask, with pinpoint holes for eyes, such as is used in the North to protect the eyes and face against the wind. The minute eye-holes would reduce the area of eye exposure to an absolute minimum, but allow a degree of normal vision.

Any opaque substance will, of course, deflect light and provided sufficient warning is given, the eyes can be shielded by the arms or by the ground. Until an eye-shield has been perfected, therefore, the best protection will be a timely warning so that a protective attitude can be adopted. A high standard of discipline and leadership and a thorough briefing as to what to expect will enable the control of those who are temporarily blinded to be maintained.

Heat — Immediately after the flash, heat or thermal radiation occurs, the terrible results of which on exposed flesh the Hiroshima doctor described so vividly. The burns which he described were caused by the direct heat rays but casualties with burns may also occur indirectly from burning clothing and equipment and from the grass and bush fires which are ignited by the heat rays. Particularly vulnerable to the latter would be any headquarters, reserves or supplies located therein and, for this reason, such areas of concealment should be avoided.

Protection against thermal radiation can be achieved by enclosing the entire body, including the hands and face, with a heat-resistant and fireproof covering. This covering

³*Hiroshima Diary* by Michihiko Hachuja, MD, translated and edited by Warner Wells, MD. Copyright 1955, University of North Carolina Press (pp. 13, 15).

should be multi-layered, and as light as possible in weight and colour, so that the maximum amount of heat is reflected and the essential movements of the body, particularly the functions of breathing, vision and weapon manipulation, are unrestricted.

It is impossible, at present, to provide suitable protection against heat because most of a soldier's accoutrements are neither heat-resistant nor fireproof; in fact, some items such as parkas, ponchos and sleeping bags, all of which have a nylon cellulose base, are highly inflammable. Research and development in this field is clearly required if soldiers are to survive the heat effects of the weapon.

In the field, the best and most available means of protection against both flash and heat is ordinary earth; and the deeper that field defences can be constructed the better the protection that is afforded. However, since digging does take time and effort, some means of mechanical or chemical assistance would be invaluable.

Having arranged to protect himself from heat and flash by burrowing into the ground, the soldier must decide how best to conduct his defence — a somewhat difficult feat against a mobile surface-operating attacker. In fact, the attacker could achieve his aim without using the nuclear weapon if insufficient defenders were on the surface to deter him. Obviously, the defenders will have to man some surface fire and observation posts, the personnel occupying them gaining a modicum of protection from their nuclear clothing (when perfected) and from shallow weapon pits.

In the attack, when units must remain mobile and on the surface,

deep field defences would not be feasible; protection must, therefore, be afforded by the overhead and side cover of light armoured personnel carriers and light tanks. Armour has proven, in tests, to be an excellent shield against flash and heat.

The construction of deep nuclear field defences should be practised on exercises until a suitable design has been perfected and its efficiency against nuclear weapons should be tested against an actual nuclear weapon. At the same time, troops should be taught that casualties and damage from heat can be reduced by avoiding the direct rays by taking cover in ditches or behind banks of earth. The positioning of headquarters, supplies and reserves in dry woods or buildings should be avoided.

Blast — The next effect, flowing out from the explosion immediately after the flash and heat, is blast. As noted by Rigg in his description of a nuclear battlefield, blast is capable of lifting turrets from tanks. It can also overturn guns and armoured personnel carriers, flatten makeshift shelters, and strip soldiers of shoes, clothing and limbs.

Solid earth, in the form of well-revetted field defences, is again the best protection available, and, again, the deeper and stronger the defences the better the protection afforded; flimsy shelters and buildings should be avoided.

Blast also has two indirect effects: the instant transformation of all loose objects into high-speed flying missiles, and the paralytic shock effects of blast pressures upon the brain.

A high proportion of the casualties at Hiroshima and Nagasaki were caused by the innumerable flying missiles, particularly particles

of window glass, which the blast wave propelled at high speeds in all directions. Although glass itself will not be a problem on the battlefield, loose objects such as rifles, helmets, wireless aers, stones and trees have the capability, when transformed into missiles, of lacerating and decapitating personnel and of damaging equipment.

Casualties from this source can be reduced materially by keeping the battlefield clear of loose debris, and by securing or shielding movable objects. Again, since shattered fragments of trees and timber can become highly dangerous missiles, woods and buildings should be avoided.

Shock, or battle fatigue as it is now called, is usually considered to be a mental, rather than a physical condition. It is caused, not only by blast, but by a combination of such battlefield conditions as noise, hurt, death, devastation and frustration. The characteristics differ according to the receptiveness of the individual: some men in shock tend to panic and become uncontrollable, others lie dazed and incoherent, and none are able to react to orders. The permanence of shock also varies with the proximity of the individual to the shock-producing conditions and to his previous physical and mental state.

Because shock is mainly a mental condition, the key to its control lies in leadership and discipline. Only by leadership qualities which gain the trust and respect of men and by insistence upon absolute discipline, can leaders raise men from the depths of shock depression and urge them into activity. Even then shock is sometimes so severe that normal counter-measures fail and it becomes necessary to penetrate unreceptive

minds and frightened souls by harsher means, such as loud and coarse "battlefield language". Occasionally, unfortunately, more drastic and even violent action is required.

The degree of stability in individuals, hence the incidence of shock, depends to a great extent upon their prior training and indoctrination and upon the standard of discipline which has been established. It is accepted that rigid discipline is required in order to maintain control but it must be enforced with understanding, sympathy and common sense if leaders are to get the best out of their men. The aim of leaders should be to intergrate men of stability into tightly knit fighting teams so that the team, as a whole, is able to withstand the strain of the battlefield.

Nuclear Radiation—The final effect, in chronological sequence from the instant of the explosion, is nuclear radiation itself. This effect, which penetrates the body with its radio-active rays and which is entirely absent from conventional explosions, may occur within one minute in the immediate vicinity of the explosion, or subsequently in "fall-out", at some distance from ground zero.

Nuclear radiation is a stealthy weapon. With no outward or visible sign, a man with a large dose of nuclear radiation may live for days, only to die without ever realizing his exposure. Conversely, he may display all the symptoms, such as vomiting, diarrhoea, blisters, and loss of hair, of a large dose of radiation, yet eventually recover. The seriousness of the casualty depends upon the nuclear radiation which is absorbed; for example, a dose of over 700 Roentgens would make sur-

vival improbable, whereas a dose of under 100 Roentgens might incapacitate a man for only a short period of time.

The penetration of nuclear radiation into the body can be arrested by shielding the body with an opaque substance. Lead, for instance, is an excellent shield but is, of course, not usually available in the field. Natural earth, on the other hand, is readily available and makes a good radiation shield, as long as deep, well-revetted dugouts and slit trenches are constructed. If these are made with at least two feet of earth overhead cover and are located on reverse terrain slopes, the shield should be almost impenetrable. Underground burrowing for protection against nuclear radiation does, of course, raise the same problems of the conduct of defence as have been discussed previously and similar solutions will be necessary.

Since the mysteries of nuclear radiation still contain a good many real or imagined "unknowns", its known peculiarities must be made very clear to the soldier. It is important to emphasize, for instance, that man's reproductive organs are not affected by nuclear radiation, and that only a small minority of radiation casualties actually are fatal. In any event, most radiation fatalities would have been close enough to ground zero to have been killed by some other effect anyway. The important point is that, with prompt and adequate medical treatment, nuclear radiation casualties do survive without any lasting effects whatsoever. This was adequately proven recently by the complete recovery of some Marshalese who suffered from severe radiation sickness after exposure to nuclear fallout from a Pacific test.

Summary of Effects

The several effects of the nuclear weapons are, therefore: flash, heat, blast and nuclear radiation. Each effect is capable of causing severe casualties by itself or in combination with other effects, but the adoption of protective measures will reduce the extent of these casualties considerably. In the field protective measures can be provided: by adopting dispersed positions, but not so dispersed as to create a vacuum in which the enemy can operate without employing his nuclear weapon; by developing heat-resistant, fire-proof and radiation-proof clothing and personal equipment, designed to allow unrestricted movement, vision and weapon manipulation; by constructing deep and strong field defences, built with the aid of portable digging aids; and by transporting personnel in light, mobile personnel carriers and tanks which are equipped with overhead cover.

These are collective protective measures; individual measures must include nuclear indoctrination courses which will brief the soldier as to the effects of weapon and the best means of combatting them. Field training exercises must be as realistic, with real and/or simulated nuclear conditions, as it is possible to make them.

In the final outcome, however, the maintenance of order, hence survival, on the nuclear battlefield will be possible only if troops are superbly led and absolutely disciplined. At the moment of the greatest chaos, the soldier must defy all else and calmly and efficiently continue to obey orders and perform his duties.

There is no doubt that nuclear warfare does present a very grim picture but, while the threat of the weapon is with us, it is incumbent

upon us to examine its horrors and to make plans to combat them. Nothing less than complete frankness is acceptable in the training and indoctrination of our soldiers.

It may be, in order to cope with nuclear warfare, that we require a soldier with different characteristics and temperament; perhaps our disciplinary and training methods should be changed to meet the challenge of modern war. These are questions which we should examine very carefully.

New Type of Soldier?

The one guarantee of success in nuclear war is that the survivors of the chaos, confusion and utter desolation of the nuclear battlefield, are resolved to stand firm and steadfast. Unfortunately, the characteristic of stability under adverse conditions is not always present in the youth of today. Men who possess it may be difficult to find in quantity.

Stability is required of both leaders and followers: leaders must be able to retain control, regardless of conditions, and to exert their wills upon those whom they command; followers, on the other hand, must have the ability to maintain control of themselves and to remain amenable to discipline and obedient to orders whatever the circumstances.

The question is: is it possible to find men who will submit willingly to an increasingly rigid form of discipline, considering the general lack of it in the homes and schools of today? And, can leaders be found who are sufficiently strong to enforce this discipline?

Men who enlist in the Army will continue to be recruited from all walks of life: they will come from factories and farms, from cities and towns, and from every sort of

domestic environment. Their different backgrounds and characteristics will be carefully assessed so that each can be fitted into the military position most suitable for him. Actually, individual assessment and job selection are nothing new to the Services, but they may be more difficult to accomplish in the future when, at the same time, we are attempting to mould various backgrounds and characteristics to a higher standard of training and discipline.

Perhaps, in reviewing our current selection and assessment methods, entirely new standards should be evolved. It may be possible, for instance, to segregate individuals into those who have a tendency towards shock or panic and those who do not, and into those with or without the ability to lead. Fighting units could then be built up with the best specimens of manhood while those of lesser stability could be funnelled into less-sensitive, non-warlike positions. Perhaps the selection machinery could go even further and segregate the fighting men into teams specifically earmarked either for the defence or the attack: for example, stubborn, cautious types could be directed to the defence team, and active, thrusting types to the attack team. Teams could then be interchanged, depending on the operation, in a manner similar to that of interchanging teams in ice hockey and American football.

Since the assessment and selection procedures can probably never guarantee a clear segregation of individual characteristics, the discipline and training of the Army will have to continue to be designed for all varieties of man. It will still be necessary to raise to a common standard, a country-wide cross-section of

young men.

It would seem, therefore, that there is no "new type" of soldier; it is his indoctrination, discipline and training which have to be adjusted to a new environment.

Discipline

Most people think that discipline is enforced solely by the authority of rank and by the fear of punishment, but the relationship between leaders and their men is not nearly as simple. The actions of soldiers in battle have always been regulated by the issuing of commands in accordance with an overall plan. Commands are obeyed because of discipline, and discipline is established by practising drills until they become habits. Punishment is warranted only when rules are continuously or flagrantly broken.

The one word "Attention" is a basic example of the necessity of drill to establish discipline. At the command "Attention", the soldier drops whatever he is doing, puts his hands at his sides and stands still, looking straight ahead. Only then is he in a position to hear and act upon further commands. If he were not in this attentive attitude, the issuer of the commands would have no way of making his command heard and acted upon. This simple drill, therefore, is a vital link in the chain of discipline.

Since drill is a means to an end and not an end in itself, each drill must have an application to a real action on the battlefield, otherwise it would have no purpose. As this example relates, soldiers had the same thoughts some sixty years ago:

"It is unfortunately a common fault of drill instructors, when teaching and handling of arms, to attach

greater importance to (drill) and to the resounding slap on the butt (to which every sergeant would like to join an "Eyes Left"), than to the skilful use of the rifle . . ."⁴

Discipline is simply absolute obedience to commands. It is achieved, in the first instance, by the constant practice of drills until they become automatic. Perfection in drill is a basic requirement in training because well drilled soldiers are well disciplined, hence are easier to train. However, since no "parade ground" soldier is useful on the battlefield unless he is trained in battlefield techniques, all drill must be related to battlefield activities.

In summary, therefore, it appears that the discipline of soldiers for nuclear warfare must be even more rigid than it has been in the past. It will be attained by insisting upon absolute obedience through the repetition of practical military drills.

Leadership

Since leadership is the key to the problem of maintaining control in war, the early selection and training of leaders is probably the most important military peace-time activity.

Leaders are made, not born, although they must possess certain inherent leadership characteristics. It is these characteristics which must be recognized and nurtured.

On the nuclear battlefield, as we have seen, greater individuality and initiative will be required. The surviving leaders must be able at once to establish control and to raise their men from shocked inactivity to fighting efficiency. The competence of these leaders will be the factor

⁴*Letters on Infantry* by Prince Kraft Zu Hohenloke-Mgelfingen, London: Edward Stanford 12, 13, 14 Long Acre, W.C., 1905. (Translated by Lt-Col. N. L. Walford, R.A.) p. 74.

that tips the balance on the nuclear battlefield.

The characteristics required of leaders for nuclear warfare are no different from those required for other wars. Leaders must set personal examples for their followers; they must practise absolute self-discipline and insist upon absolute discipline; and they must have knowledge which is superior to that of their subordinates. These are the inherent characteristics of potential leaders whose beginnings must be recognized early if those who possess them are to be prepared for their responsibilities.

Training

The training of units for nuclear war includes—in addition to training in the use of nuclear weapons—training in the defence against these weapons. Defence may be active, such as the finding, fixing, and destruction of enemy nuclear delivery devices, or it may be passive. Passive defence against the nuclear weapon includes the dispersion of units on the battlefield (but this can be two-edged if units are so dispersed that the enemy can achieve his aim without using his weapon), concealment, camouflage and deception, and the use of natural and artificial protective field defences.

Training for nuclear warfare must be as nuclear realistic as it is possible to make it. The battle school of the past, with its conventional overhead field firing, is not sufficient; a way must be found, within the bounds of safety and economy, to expose soldiers to the effects of the nuclear weapon itself.

Realism can be provided in exercises by simulating nuclear exposures. At present, nuclear simulators are merely "fireworks" which pro-

duce a big bang and a mushroom cloud of smoke. If simulators could be made to burst in the air with sufficient potency to cause mild shock and inflict temporary nausea and blindness on unprotected troops, the dangers of being unprotected would be realized and protective measures would be adopted. For instance, a spray of coloured water from a simulated nuclear air burst might be one method of designating those who had received a dose of nuclear radiation. A mild form of gas sufficient to make men vomit but cause no serious illness might be emitted from the simulator, and the flash at the instant of the explosion might be sufficiently bright to induce temporary blindness. These, and other ideas, should be the subject of detailed study if realistic training aids are to be produced.

The attendance of soldiers at nuclear tests in the Nevada Desert and Pacific Atolls has been, of course, an important means of demonstrating the effects of nuclear weapons, but the procedures used have not been as realistic as they might have been. The tests have been so carefully staged with such elaborate safety precautions that the reaction of the troops, as they emerge from their well-protected dugouts after all danger has passed, has often been one of disdain for the potency of the weapon. This has a tendency to leave a false impression on soldiers' minds as to the weapon's capabilities.

Training for war must be conducted with maximum realism. We are inclined to underemphasize realism in training in peace-time in the interests of safety and, heretofore, we have been fortunate in having sufficient time, after the emergency occurs, to complete a realistic training programme. Since there will not

be time to do this in the future, training must be completed before hostilities commence. Otherwise the chances of success will be remote.

In our training programmes the soldier is taught weapon handling and tactics in order to defeat the enemy by skill at arms; he must also be prepared mentally and physically for conditions he must face on the battlefield. It is this aspect of training which has been neglected in so far as nuclear warfare is concerned and it is this aspect upon which we must concentrate our efforts.

Conclusion

Clausewitz knew nothing of nuclear warfare, and when he spoke of soldiers having to encounter things for the first time in war, he was referring to things much more simple than nuclear weapons. His principle is, however, as applicable today as it was when he uttered it.

Although the nuclear weapon has been with us for more than a decade and has now become a familiar household word, it is probably safe to say that the average soldier knows less about its actual effects than is contained in this brief study. The result is that, not appreciating what the weapon can do, he is entirely unable to take steps to counter it.

Those responsible for training should take heed of Clausewitz's principle and, while the threat of the nuclear weapon is with us, should

insist that protection against it is included in their programmes. With typical Army inconsistency we subject soldiers to Padres' Hours for their spiritual welfare; Medical Officers' Hours for their physical welfare, and current affairs discussions for their general welfare, but we fail to teach them the plain stark facts of human experience on the battlefield. This is left for them to find out for themselves after the battle has been joined.

Soldiers will continue to be recruited from a cross-section of the youth of the country, and this is the clay from which the fighting men must be moulded. He will not be a "new type", nor is one required for nuclear war; the problem is simply to ensure that the average man is fully aware of the probable conditions on the nuclear battlefield and is prepared to protect himself against the effects of the weapon.

If any changes are required for nuclear war it is that the professional standards demanded of the soldier must be higher than ever before and that discipline must be more rigid. If these requirements are met, and if a practical programme of preparation and training is initiated, the results should be rewarding.

That nuclear warfare will be more brutal than anything we have known there is no doubt, but stouthearted soldiers, who are prepared to face the horror, will in the end find success.

Untrained Personnel

In no other profession are the penalties for employing untrained personnel so appalling and so irre-

vocable as in the military.—*General of the U.S. Army, Douglas MacArthur.*

Strategic Strait Jacket

REVIEWED BY LIEUT.-COLONEL J. A. STAIRS, MBE, CD,
ARMY DEVELOPMENT ESTABLISHMENT, ARMY HEADQUARTERS, OTTAWA

For those who remember how close the West came to being shoved into the sea in Korea because nuclear weapons were not used and sufficient conventional weapons were not at first available, Colonel Miksche's latest book* will seem to be a statement of the obvious. But what is obvious to the professional is seldom obvious to the layman and if Colonel Miksche's arguments can help prevent future Koreas, or Munichs, then this book is a welcome addition to the "what-is-wrong-with-us" series.

The book starts with an analysis of coming events and emphasizes the role that will be played by the awakening peoples of Asia and Africa. Europe can be outflanked. Atomic weapons offer no protection against ideas. Chapter Two deals with recent past history: NATO, Lisbon, overseas wars, Suez. Miksche compares East and West defence systems and concludes that the West has been psychologically disarmed and has already lost the arms race. The third chapter discusses the inflexibility of a system that is too one-sidedly atomic, and the danger of being placed on the horns of a total-war-or-appeasement dilemma by an enemy whose nuclear and conventional arms can be used to produce any degree of political pressure. The atomically one-sided ally is considered dangerous and unreliable. Chapter Four deals with the impossibility of defence against high-speed air attack and questions

the wisdom of using a weapon against which one is oneself defenceless. Chapter Five stresses the need for a balance between quantity and quality: it is no use having helicopter units if the ammunition dumps are empty. The final chapter discusses Army reorganization. Miksche considers that the division is uneconomic, cumbersome and vulnerable in nuclear war and believes that the army itself should be the basic operational unit within which there should be small, economic and flexible units that can be combined in various ways to meet any given situation. The last pages of the book are a summing up, ending with the words "Rien n'est si dangereux qu'un ignorant ami; mieux vaudrait un sage ennemi."

Although the main theme of this book appears sound and is reasonably well put forward in the subsidiary themes developed in the chapters, yet the arguments advanced at the sentence level are often disappointing. A number of repetitions, contradictions and vague statements and opinions often mar an otherwise convincing book.

A second fault is symbolized by the closing words quoted above. There is a marked tendency to treat the enemy as wise, powerful and all-seeing, while our strongest ally is often portrayed as a child playing with toys in a way that may destroy the world. This seems to reflect the author's personal feelings more than it does the facts.

A final criticism is one that applies to nearly all the "what-is-

**The Failure of Atomic Strategy.* By F. O. Miksche. British Book Service (Canada) Ltd., Kingswood House, 1068 Broadview Ave., Toronto 6, Ont. \$5.75.

War For Survival?

REVIEWED BY CAPTAIN W. S. WILSON, CD, QUEEN'S OWN RIFLES OF CANADA*

A third World War will be fought not for victory but for survival. According to Professor Kieffer,† we in the Democracies must recognize the inevitability of this conflict, take stock of our position, and decide upon what course of action we will take. For this war represents the "last great fight" in which one way of life, Communism or Democracy, must die. Professor Kieffer is convinced, and attempts to convince the reader, that the Democracies by inaction and lack of cohesion are allowing the only chance of winning this war of survival to slip through their fingers.

An eminent geopolitician and political scientist, he cites fundamental Communist dogma, the speeches of leading Communists and the post-Second World War actions of the USSR to prove that there is no other course but war and that only the side which has the best

strategy will survive. He defines strategy as being based on five factors: moral, physical, mathematical, geographical and statistical. He sums up the relative positions of the USSR and the free world and describes the probable strategy of the Communists in the five major areas of conflict: the United States, Europe, the Middle East, South-East Asia and the Far East. He then proceeds to sketch a suggested strategy for survival to be followed by the free world under American leadership in each of these sectors. He emphasizes the importance of the post-war period because of the history of failures and lack of planning by the Democracies for the periods after the First and Second World Wars. He concludes by describing the nuclear weapons as only a newer, more destructive part of the world's arsenals and states that the "ultimate weapon" is not the A-bomb but men's minds.

This is a rather frightening book which is written in serious-minded and hard-hitting prose. The author makes no attempt to hide his alarm

*The reviewer is a student at the Canadian Army Staff College, Kingston, Ont.—Editor.

†*Strategy for Survival*. By John E. Kieffer. David McKay Company, Inc., New York, N.Y. 1953. 298 pp. \$4.00.

Strategic Strait Jacket

(Continued from preceding page)

wrong-with-us" series of books and it is that they really solve nothing for very long. If the West is indeed out of control on the downward road, then Colonel Miksche's book only provides one more formula for applying the brake at the expense of the brake lining, but suggests no real way for stopping the car. Throwing away energy at the wrong level of understanding is like taking dope, it gives temporary relief but the health

of the addict continues to deteriorate.

But Colonel Miksche is a well-read author and he has presented many useful facts and put forward many provocative ideas. Whether right or wrong, he makes the reader think, and in an age when it is the fashion to reduce everything to intellectual pabulum, Miksche's mixture is refreshing and this not least because Miksche himself is undoubtedly sincere.

at the precarious position of the free world and the imminence of the danger with which it is faced. This book is not designed for light reading and may therefore alienate readers who are inclined to be content with the *status quo* and to avoid the realities of world politics. However, the author's clarity of style and avoidance of unnecessary technical language make the book easy to read and understand.

Professor Kieffer freely admits that his book may be "grim, controversial, terrifying, brutal and callous"; it is all of these but, as he maintains, the business of survival is a subject which cannot be "brushed aside, laughed at, or eliminated by the substitution of fairy tales, fine oratory, or wishful thinking". Published more than six years ago when international tensions were perhaps greater, his arguments and the evidence he presents are no less valid to-day. In fact, many of the actions which he predicted in 1953 have been borne out by history in the past few years. Fortunately, his direct prediction of the "shooting war" for survival has not yet been fulfilled.

Designed to frighten the people of the free world into concerted action, his language is inclined at times to be melodramatic and sensational in a manner more typical of a newspaper article than a considered thesis. Thus, phrases such as "we thirst for peace as plants in an

arid soil thirst for moisture" is perhaps too lyrical and incongruous in this setting. Also, "Communism . . . is a religion of evil dedicated to a materialistic God, spread by violence, deceit and treachery through the evangelistic doctrine of 'Believe or perish'" smacks more of the rostrum. In some parts of the book, notably the chapters on the position of Russia and the position of the Democracies, he tends to digress and editorialize, allowing an "I-told-you-so" attitude to creep in, but generally speaking, he keeps well to his theme.

Professor Kieffer does not try to introduce new material other than a definition of strategy which differs somewhat from the classic definition. The reader who is a student of military history and current affairs will recognize many theories and plans which have been expounded by other writers. However, this does not detract from the value and interest of the book. The main value for the military student lies in the clarity of the exposition and the careful and detailed analysis of the world situation. Professor Kieffer's suggested strategy is straightforward, simple and workable, deriving from an appraisal which reads much like a military appreciation. The tragedy of this book is that it has failed in its purpose since the Democracies are not one whit nearer a clear-cut strategy for survival than in 1953.

Shades of the American Civil War

95 Years Ago: We are pleased to learn that Col. Guy V. Henry, who recently very honourably declined a brevet brigadier-generalcy because by some error it was conferred on him for gallant conduct in an action at which he was not present, has

since received a new appointment to the same brevet rank for gallant and meritorious services during the present campaign before Richmond.

—*From the files of the Army-Navy-Air Force Journal (U.S.).*

THE PSYCHOLOGY OF FEAR

LIEUT.-COLONEL K. E. LINDEMAN IN *Ny Militar Tidskrift* (SWEDEN)*

The concept of fear is by no means a theoretical matter, but a real factor among the phenomena of war and one which deserves great attention. The professional military have a definite interest in diagnosis and analysis of the occurrence and character of fear, for it is obvious that if the nature and cause of fear can be discovered, the chances are better that its subsequent occurrence can be prevented.

We know so little about mental anguish on the battlefield because national pride and military prestige tend to forbid a matter-of-fact discussion and study of the phenomenon.

The Fear Concept

The capacity to fear, or to be afraid, lies deep within the mind of every soldier. The soldier who says that he has never known fear is lying, or else he does not possess the normal instincts of self-preservation. As Maredock Nay said: "A triple liar is the person who boasts that he has never known fear".

All know fear, but all do not show it—these are the so-called brave. Even the most courageous can become afraid. One can only learn how to combat fear, not how to overcome it wholly, for bravery consists in the ability to repress the overly excited instinct of self-preservation. One of the strongest impressions one receives when he faces the enemy for the first time is that he is afraid. The only differ-

ence between a courageous and a cowardly man is that the courageous one is able to control his fear, while the cowardly one cannot.

The instinct of self-preservation is very dominant. Its manifestations differ with different persons and alter with every individual.

Fear of death is the soldier's most dangerous enemy. It never lets go of him entirely but always continues to exist, more or less controlled by his will. The anxiety, nervousness, or agony of mind by which fear under certain circumstances is accompanied, develops at times into terror and panic; even a highly developed human being perceives the world about him from a lower mental plane. The instinct of self-preservation is, indeed, very strong, and there is no need to pretend that such is not the case.

Psychological Angles

Courage is not an absolute concept—one day bold, another day cautious, is not unusual. Boldness in one case does not exclude excessive cautiousness in another for courage is not something that one permanently acquires. The question of fear and courage is by no means as easy to answer as many are inclined to imagine, and is certainly more complicated in the modern war of machines. Here, more than ever, a spiritual power of resistance is required.

Primitive instinct counsels the soldier to conceal himself or flee. Highly tensed nerves strained to the breaking point often give way. A dense artillery concentration or a bombing attack can be a sufficient

*Translated by Mr. LaVergne Dale, Leavenworth, Kansas, this article was published in the October 1958 issue of the Military Review (U.S.), from which publication it is reprinted.—Editor.

cause. The belief that one is surrounded, or knowledge of the fact that the enemy's tanks are breaking through, has a similar terrifying effect.

Lack of success, loss of sleep, hunger, thirst, heavy losses, bad weather, or enemy fire produce depression. Long waiting also is depressing. Action itself does not make such heavy spiritual demands, and agitation of mind is greatest during the preparational phase before the action itself begins.

Everything that is wearing to the physical body also fatigues the mind. "Tired men become more frightened," it is said. Therefore, good health, training, and rest play a major role in the defeat of fear. Confidence in command, confidence in weapons, and, above all, successes achieved, are of great significance. Initial success is of great value. Likewise, the feeling that the cause one is fighting for merits not only his effort but also sacrifice is important in the creation of courage and self-confidence.

Battle Experience

Probably most persons have asked themselves how it feels to go into battle and to be face to face with death. Quite naturally, no general reply to this question can be found. It is difficult to judge whether a soldier will have normal "combat reaction", that is, how his fear is constituted. There are some who succeed in keeping their reactions in hand in critical situations, but how a person will react in battle is not known until during or after the opening of the enemy's fire on him.

In the absence of battle experience, every group of forces experiences the psychosis of fear at its first encounter with the enemy.

Even the best of training and discipline can be inadequate for suppressing this phenomenon. Behaviour varies greatly from soldier to soldier. Possibly in no case will it be entirely heroic. Gradually, however, the man learns to act logically and simply — in the way that is best calculated to save his life.

The modern soldier's encounter with war is brutal and usually possesses the ingredients which render life an inferno. But it can be observed how the will and the ability to overcome lack of courage and fear of death increase with every failure. The combatant becomes firmer and more dogged in his efforts, and a young man's eyes are opened in the face of the bloody reality of killing. They first become accustomed, curious, then eager, and, finally, hardened — surer and more brutal in their fearlessness. Even those who begin the war as youths are changed into defiant men.

It is also true that experiences, especially severe ones, may reduce lust for battle. Units with high casualty figures are less disposed to fight than those which have been through a similar hazardous experience with low casualty figures.

The Unknown

The unknown is always hazardous. Excessive noise, unclear situations, anything which has no clearly evident cause and is frightening and mysterious is productive of fear. The frightened person sees everything but he sees reality in another light. Bushes and shadows become enemy soldiers and sounds are heard which do not exist. The surrounding world on the front is seen in darker colours and more filled with danger than it actually is.

Often preconceived ideas concern-

ing something that is scheduled to occur gives rise to fear as great — if not greater — than the occurrence itself. A clear understanding of coming dangers diminishes their effect, while suspense relative to an undefined, dangerous situation intensifies the feeling of fear.

Absolute stillness alternating with the mighty noise of battle can irritate. In the case of a unit suddenly confronting a situation that is the very opposite of what has been reported, the resulting surprise often is sufficiently great for fear emotions to present themselves. A unit which is to fight with confidence must be given unfavourable as well as favourable information. The less surprise a combat situation presents, the more quickly is the soldier able to adapt himself to it.

Keep the unit informed of the situation is an old and good rule. This is a factor which contributes toward keeping the soldier in check and which helps him to contemplate danger more calmly. Actual knowledge and orientation concerning danger and situation are useful. In order to be able to "stand the strain" in trying situations, he must know what he is fighting for; the worst thing in the face of danger is the unexpected. Knowledge concerning situations means that fear already is half overcome and mastered.

Solitude

There are moments when it is difficult for a man to stand alone. Nothing terrifies a soldier more than to be alone with his fear. The worst thing is his thought of the emptiness of the space about him (his field of battle) and his helplessness in just that place. This gives rise to overwhelming anxiety

with regard to his safety. In such a situation being alone appears unendurable; for this reason he seeks to find the company of others, cost what it may. Comradeship contributes toward suppression of fear, and one is never so afraid as when he knows he must face danger alone. There is nothing to be found that makes for calmness in battle more than nearness to someone else who is not possessed of fear and panic.

The soldier will feel that someone else is sharing his burdens. If he is with others in a unit with a leader of established powers and recognized authority he is more calm. It is well to mix experienced and courageous men with beginners and men with less self-control.

Panic

An extreme form of fear and terror is panic. During our last war we experienced the problem and saw that cool and confident — almost phlegmatic — soldiers were not exempt from manifestations of panic. Panic occurs in all armies, good as well as bad. In certain situations troop units of especially good morale and in spite of good command may fall victim to panic.

Panic in its true sense is the condition when the mass of the forces, in the face of danger, suddenly is seized with the feeling, "Every man for himself". Each and every one is engaged only in seeking to save himself. It is an extreme manifestation which is a common phenomenon with all living beings. No one can escape the effects of flight psychosis if he chances to be within its circle of influence.

Fear acts in a hindering and crippling manner on thought activity, power of action, and initiative. Under certain conditions, fear ob-

literates every trace of rationality and does away with all rules of discipline, honour, and propriety. Often losses occur for those who, for example, in the case of a tank attack, in panic abandon the foxholes which have given them protection. Flight, in many cases, can be hazardous both for the individual or unit. Continuing to fight may mean to continue to live, while flight may mean that one will be killed.

The commander must try to eliminate hysteria and panic which can lead to the complete break-down of psychically disturbed individuals. Some of those who have panicked can be returned to the front after treatment. Very simple measures often are sufficient for first aid. As a rule, food, sleep, and a calming influence constitute adequate treatment.

In the more intimate circles and in modern *belles-lettres* which deal with war it is not considered shameful to admit that one sometimes has been afraid. It was quite natural—those who go to pieces are classified as medical cases.

Discipline

Discipline overcomes fear. A poorly disciplined unit displays the same weakness and fear that are habitually manifested in a heterogeneous crowd, for it is only discipline that transforms a crowd of individuals into a unit. A well-disciplined unit does not allow itself to be terrified by a suddenly appearing danger, but a poorly disciplined unit reacts as a simple mass of human individuals and scatters in unreasoning flight. In view of this fact it seems unbelievable that there are persons who undervalue the importance of discipline and training.

An acquired and firmly fixed

habit of sure handling of weapons and of properly conducting oneself under different and changing circumstances is productive of self-confidence. This counteracts the influence which settles upon and fixes itself on the combatant—especially the beginner.

Discipline should, therefore, become partly a habit. Discipline, in conjunction with habit and perhaps to some degree by reason of risk of punishment, exercises a restraining effect on the individual's fear instincts in certain difficult situations.

Mastering Fear

Every success crosses two thresholds: first fear is conquered, then the enemy. The task is to overcome fear and seek to attain a condition in which fear is not present, which we call courage. Fear is inseparable from war, but it can be combated. It is hard to be courageous, but fear can be mastered more or less successfully by an effort of will. There are many different types of fear to be controlled.

The cause of mental anguish can never be completely removed. On the other hand, there are certain possibilities of preventing it from finding expression in the form of dangerous tendencies. One means is discipline, which we have already mentioned. Discipline is an effectual factor when fear is to be combated. However, there are many cases when it has to be fortified with other means.

The atmosphere of the field of battle gives birth to mental tension. Tension seeks an outlet. If the unit is obliged to wait during a bombing attack or artillery bombardment before it is able, for example, to make a counter-attack, it may be wise to distract the men's thoughts from the

dangers of the moment by compelling them to engage in some form of activity. The command must, in that case, see to it that each and every one has something useful at hand to do. Action tends to prevent a breakdown of courage. Momentary waiting and inaction must be replaced by active, purposeful activity. Otherwise, tension mounts and may assume a detrimental form.

The soldier's fear is cancelled out by the work he must do. Lying idle in the enemy's artillery preparation can be the most terrifying thing a man can experience. By conversing with his comrades he escapes his own thoughts and prevents an all too gloomy state of mind from developing. An amusing remark made by some witty individual often is able to transform severe tension into a good laugh. Work and some good task to perform are the best remedies for nervous tension and trying situations.

Combat efficiency in a unit depends partly on the methods employed in seeking to keep fear under control. This means that by schooling the higher personal values are developed—schooling of the soldier's will to keep himself in hand. Training plays its distinct role. Ways and modes of action must be sought that provide counteraction against fear.

We must start with the premise that fear is a natural reaction which can be mastered to some degree. Realistic training exercises, stressing terrorizing situations together with sound effects, increase self-confidence and also are mentally hardening. It is not alone the battlefield's explosions, its smell, anguished cries, fallen comrades, and many other impressions against which the soldier must be hardened,

but his self-confidence must be built up by means of a continual instructional process. He can be partially "vaccinated" against fear by his training if all means are employed.

An exalting and compelling idea which imparts the requisite will and readiness for sacrifice must be cultivated and developed. A strong love for native land or some other comparable sustaining feeling gives strength in difficult situations. Troop and corps spirit must not be forgotten in this connection. If the soldier feels that he belongs to an invincible unit, there will be no limit to his efforts and self-commitment. A sense of duty which knows no compromise cannot be valued highly enough when courage is being tried. A feeling of pride with regard to prior engagements with the unit and a desire for special recognition makes the soldier more fearless in the face of danger. The soldier's schooling must instil in him strict views with regard to honour and duty.

Moral Courage

One of a commander's principal characteristics is that he should possess the courage to accept responsibility. Moral responsibility can be a heavy burden for a person in a position of leadership. He is obliged at times to request the extreme, and moral courage is required constantly.

The moral strength of staff personnel very often is tried in the conduct of their activities. There are staff members who do only those things that are pleasing to their chief. There can be a struggle between loyalty to the commander and belief in their cause.

Courage thus can be required outside the sphere of enemy action. It

is worthy of note that many have greater courage in the face of the enemy than under peaceful circumstances. This latter often has been designated as "civil courage".

National Courage

One hears it asserted at times, with great positiveness, that there are peoples and nations more courageous and cool-headed than others. It is insisted that courage is especially characteristic of certain races.

The Chinese have long been represented as almost useless as soldier material. During the last war, on the other hand, the Chinese armies displayed supreme bravery.

The Russian soldier has been estimated very differently in different periods.

The French soldier was respected as a tough opponent by his German adversaries. We need only to call to mind the French and the German soldiers of the battles of World War I. There appear to be many factors which effect this: training, war objective, political factors, and leadership. In any event, the concept of courage is not a constant national characteristic.

Leadership

The leader captures attention by his own inspiring conduct. Troops

are always inclined to follow a leader who is able to draw them after him and exercise his command over them in the proper manner. There are commanders who instil a desire for action in their men. It must be apparent to the men that the one who is leading them is less afraid than they are. A courageous chief seldom has cowards among his men, for the example of the superior makes for bravery in those under him. Troops always expect composure and impassivity in the face of crises, and the commander must maintain composure in all situations.

The chief must possess an independent and firm mind. He has no one on which to lean. In dangerous situations his men look instinctively in his direction and if he shows the least sign of being afraid, their combat ability will be diminished instantly, even if it does not disappear entirely.

A clear mind is an invaluable possession of both commander and men. He who does not possess inborn optimism should make it his rule to force himself to have a hopeful outlook on the situation that may be confronting him. Courage is dependent on the art of thinking optimistically.

Complete Orders

Too many officers and NCOs expect their subordinates to be mind readers. Too many expect their subordinates to do things without being told. Too often we hear "Oh, but they'll do that automatically!" But they will not, and the order will have a weakness, and one small er-

ror, one weakness, may spell failure and defeat. We must always work on the assumption that nobody will do anything unless he is ordered to—orders must be complete in every detail.—*From an article by Lt.-Col. Ballard, OBE, in The Irish Defence Journal.*

WHY PROCRASTINATE?

MR. J. W. HERON IN THE ROYAL BANK OF CANADA LETTER

Everyone in these days suffers under the feeling of being pressed for time. We do not seem to catch up with things as we used to do. We are afraid to sit down with only our thoughts for company, because those thoughts inevitably turn on something we should be doing.

Much of this feeling is due to procrastination, the habit of needlessly putting off things to which we should attend. The putting off is in turn caused by inertia and lack of planning.

This is a serious problem, because procrastination does more than almost any other habit to deprive us of satisfaction, success and happiness. It does not solve any problem when we toss it into the tray marked "pending".

More than two centuries ago Edward Young, disappointed in law, politics and in his thirty-five-year rectorship of a small church, wrote the often-quoted line "Procrastination is the thief of time." In fact, procrastination is much more. It is the thief of our self-respect. It nags at us and spoils our fun. It deprives us of the fullest realization of our ambitions and hopes.

Even our leisure is eaten into by procrastination. So many people complain that they have no time for leisure. They are constantly driven. Life for them is a steady grind or a mad dream. These are people who do not organize their time and energy. They are of the sort that find themselves nervously unfit to deal with immediate things, to stand the pressure of an urgent job.

It is amusingly true that few of us really enjoy the sensation of putting things off. Our consciences prevent

us from taking pleasure out of postponing our chores.

Young people particularly need to beware of putting off. Dante described the vice in this way: "Hesitating I remain at war 'twixt will and will not in my thoughts." Eventually, perhaps sooner than we think, it is too late. In maturity, the procrastination man finds himself one of the many ordinary, dispensable, workers, while his boyhood chum who busied himself sits at the mahogany desk.

When things are deferred till the last minute, and nothing prepared beforehand, every step finds an impediment. It becomes harder to do things. We are pushed into blundering through on hasty judgments.

Herein is a paradox. By trying to take things easy we do not make things easy. It is possible to spend more energy in figuring out ways to escape a task than is necessary to accomplish it. Our available energy is lowered by inward conflict between "do it now" and "put it off". We lose our poise, because we are always catching up, always in a hurry to do today what we should have done yesterday, always off balance.

Not only is procrastination a deadly blight on a man's life, but it is a nuisance to all his companions . . . Everyone else has to work harder to take up the slack he leaves.

Habit Comes Slyly

The habit of putting off has a way of creeping upon us insidiously. What does it matter, we think, if we don't write that letter today or telephone that prospect for business, or make that dental appointment? Tomorrow is always another day, we say blithely but childishly.

Darwin put off publication of his theories from day to day and finally from year to year, despite the urging of his friends, until he was scooped by a fellow-scientist half a world away. And people today, even in the most enlightened countries, are killing themselves by putting off such simple, though vital, things as seeing their doctors.

It is a salutary exercise to consider the successes we almost enjoyed but which escaped us because we put off decision or action. By doing things as they come along we entertain our great opportunities. But if we say to opportunity: "I am young; there is plenty of time", then opportunity passes us by and we find that, as Francis Bacon remarked in one of his essays, "opportunity has a bald noodle behind, there is nothing to grasp."

None of us needs to look beyond himself for examples. We postponed writing that report on Wednesday, found ourselves loaded with pressing jobs on Thursday and Friday, and now we have to work over the weekend without secretarial help and with no one to provide answers to unexpected questions. We put off visiting our ailing friend on our way East, saying that we could take time for the visit on our return journey, but by then it was too late. We put off our household or garden chores, perhaps trifling away our time in idle chat, and find ourselves overwhelmed by visitors or urgent duties.

The penalties of procrastination are heavy. Many a man has discovered after his house burned down that he had let his insurance lapse the previous month.

What Causes Procrastination?

It is all very well to admit that procrastination is a bad thing, but if

we are to do anything effective toward its cure we must know something of what causes it.

Procrastination may, in some instances, be attributed to ill health. Energy to tackle jobs and get them out of the way is the product of physical health and a purpose.

A child who cannot find his clothes in the morning may be unknowingly rebelling against school, and postponing his having to go there. A man who explodes in the midst of a business conference may be motivated by an inward irritation that follows a sense of putting off something that should have been given immediate attention.

If you are a chronic procrastinator it may be that your parents did more for you than they should have done. Perhaps they "picked up" after you, and did the things you left undone. You learned that by putting off duties nothing serious happened: someone else did the work.

But today you find that your habits leads to unending ills. You are actually putting off living to some fictional future date. You are making yourself unhappy because in deferring your life to the future you are missing the present and its golden opportunities for rich living. You are putting off until tomorrow not only duties and jobs but happiness and achievement.

Samuel Johnson called tomorrow "that fatal mistress of the young, the lazy, the coward and the fool."

Unpleasant Things

The truth is that we are most inclined to postpone doing things that seem at the time to be unpleasant, distasteful or difficult. When we have something like that to do, we putter around with little things, trying to keep busy so that we have an

excuse that will ease our consciences. Dreading and postponing a task may be more tiring than doing it, and apprehension over delayed unpleasantnesses may so preoccupy us that other things cannot be done effectively.

None of us escapes his quota of difficult or disagreeable tasks, and it would be well to learn from the experience of others rather than from our own that they do not fade away by being ignored. Eventually, we have to roll up our sleeves and wade into them. In the meantime, we suffer.

Dr. Ernest Jones, F.R.C.P., gives us Hamlet as an example in his book *Hamlet and Oedipus* (Doubleday Anchor, 1954.) The reasons that Hamlet gives for his hesitancy will not stand serious consideration. Says Dr. Jones: "One moment he pretends he is too cowardly to perform the deed, at another he questions the truthfulness of the ghost, at another — when the opportunity presents itself in its naked form — he thinks the time is unsuited, it would be better to wait till the King was at some evil act and then to kill him, and so on. They have each of them, it is true, a certain plausibility".

It is very different with the man who, honest with himself, has mastered the habit of putting off. He has no unpleasant jobs hanging fire. He has realized the menace of procrastination and makes sure that it never touches him.

Waiting for Inspiration

An excuse sometimes made by writers, composers, business executives and other people engaged in creative work is that they are waiting for inspiration. But inspiration is a guest who does not visit the lazy or the procrastinator as often as he

does the busy and diligent. Most writers find that the best way to win inspiration is to insert a blank sheet of paper in their typewriters.

Sir Arthur Sullivan, composer of the Gilbert and Sullivan operas, oratorios and a score of other sorts of music, said this: "One day work is hard and another day it is easy, but if I had waited for inspiration I should have done nothing."

Many offices have people in them who sharpen pencils instead of getting down to solving the puzzles in a job. Other people shroud their actions in a maze of red tape, giving as the excuse for delay that they must consider the problem carefully from every angle and think of all the possibilities.

On the whole, it is wiser to make decisions promptly and crisply than to linger over them waiting for a flash of inspiration. In a competitive society it may be staying much too late to wait till precisely the proper time.

To put off a decision while gathering or awaiting pertinent information is not procrastination, but be sure that what is awaited is pertinent and necessary. All great leaders have deliberated with caution but acted with decision and promptness.

By debating every problem, awaiting the divine spark that will shine upon the right decision, we show ourselves to be timid and distrustful of our own judgments. The Hamlets among us must learn that it is better to make a wrong decision than none at all. At least an error teaches a lesson that need never be repeated. To stand indecisively midway between our duty and our task is calamitous.

Duty is not merely to do the thing we ought to do, but to do it when we

should, whether we feel like it or not. When we make ourselves responsible for doing a job, making a plan, or directing others, we are duty and honour bound to do it at the time promised or expected.

This brings up the matter of punctuality. Immature people excuse themselves for lateness by saying that they have no sense of time, without stopping to think that if this were so they would be ahead of time as often as they are behind time.

There may be some who regard the catching of a train as a form of sport, and like to give the train a chance to get away, but people who take life at all seriously will consider it more sensible to start early than to hurry on the way. They will realize, too, that when meeting people instead of catching trains they are ill-bred who come late.

A word should be said to the person who is the victim of another's procrastination. Dr. Helen Brandon, a psychological counsellor, made constructive use of her time. In one year, she says, she spent some 120 hours a month waiting on something or somebody. "During this time I thought of 1000 article-ideas, worked on the case histories of more than 100 people, and spent at least one-third of the time relaxing in one way or another."

Time and Efficiency

Time enters into efficiency in every activity. The essence of efficiency is economy of energy, space and time. It was wittily said by Lord Chesterfield of the old Duke of Newcastle: "His Grace loses an hour in the morning, and is looking for it all the rest of the day."

The well-organized life leaves time for everything, for planning, doing, and following through. Time does not boss this sort of life like a task-

master with a whip. Time is not used up in regretting, or in trying to live life retroactively, or in explaining why something needed has not been done.

Some persons are more afflicted by procrastination than others, but everyone has at least a tinge of it. There is no use in shrugging our shoulders and saying: "That's the way I am", or in trying to forget our weakness. The biographies of successful people are crammed with the stories of overcoming weaknesses.

Perhaps the most valuable result of education, whether junior or adult, is to make us do the things we have to do when they ought to be done. Yet to cure the evil of procrastination it is not necessary to learn anything new in the way of information. Just relate what you already know to your daily problem.

Begin in small ways. Make it a rule to be orderly and systematic in dealing with your mail: lay aside only such letters as really need further thought, and then take them up immediately after the routine mail has been disposed of. Make out a complete and honest statement of what you wish to do this day, this week, this year, and determine what obstacles are standing in your way. Odds are a hundred to one that you will find your time-and-energy schedule full of holes through which time is leaking: now that you have uncovered them, you have a chance to plug them.

Your effort may mean the making of a new pattern of life, as you acquire skill in distinguishing between the better and the worse way of doing things. Why be a slave to conventional ways? Why must the mail be disposed of before you tackle the important business of the day?

Try scheduling your time. Jot

down the various jobs you must do or would like to do. Estimate the time needed for each. Number them in order of their importance to you. Then wade into them.

In *The Vision of Mirza*, time was a tide stretching from mist to mist, without limits. But our everyday time is not like that at all; it is the space between getting up in the morning and going to bed at night. Into this space we must fit our various projects and the episodes of routine living. Weak men will drift through the hours; strong men will steer from this point to that.

Whether you have a luxurious amount of free time, or are pinched for white space on your daily time chart, you will be happiest when you make sure of getting the best value for every minute. The way to avoid the feeling of marking time, of beating with futility at an unseen barrier, is to schedule your time.

This involves concentration on the job at hand so as to get it done, but it also necessitates looking ahead. Baden Powell had a game for his Boy Scouts called "Near and Far". A party of Scouts walking along a road would be halted at intervals and turned around. The boys were asked what they had noted at their feet and on the horizon. Seeing near and far is an essential part of planning our use of time.

Some people find it comforting and inspiring to look back, at the end of a day, at what they have accomplished, both in big things and little. A day which seems to have gone awry, with our plans broken up by unforeseen events, may appear to casual thinking a lost day, but when we count the items we find solace.

Overcoming Inertia

Human beings, like things in nature, suffer from inertia. It takes

more effort to start than to keep going, and it is easier to stop than to continue. Even worse, we find it possible to delude ourselves: we frame plans and make decisions and then allow ourselves to think of them as being completed.

Decision is of little account unless it is followed by action, and there is no recipe for getting things done so good as the one to start doing them. Doing nothing is negative action, but it has positive consequences: discouragement, irritation, disappointment, and even ill health and mental upset.

So don't look too long at a job before starting it. Even if progress seems slight and futile, the act of starting and proceeding a little way is a mighty force inspiring us to continue toward successful completion. Initiative is a pallid thing unless it is kept going.

Every man working toward success in professional, business or technical life will seek to find his weak points so that he may strengthen them. If his weak point is procrastination, he may have to work at it with some determination, because it has taken him a long time to achieve the proficiency in it he has now and he cannot expect to get over the habit in a week.

Don't let us defend our procrastination or find excuses for it. Churchill said with regard to the failure of planners in another area: "If you simply take up the attitude of defending it there will be no hope of improvement."

By constructive thought and action, energetically applied to the elimination of procrastination from our lives, we may make the coming year much longer than the past year in terms of things done, happiness realized and vividness of life enjoyed.

LEADERSHIP AND MAN MANAGEMENT

by

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I have read many papers on Leadership and Man Management. I have heard many people talk on this all-important subject and, frankly, I must say that some of those I have heard knew what they were talking about, but a great number knew very little about it.

The concept of Man Management or, if you prefer, Leadership is probably one of the most abused ideas, both in the Armed Forces and in the field of business enterprise. Too often those charged with the responsibility of leading or managing men give lip-service to the idea without understanding its meaning. Frequently when attending high level policy discussions both in business and the Service, I have realized that man management was the key to the problems under discussion. It has been considered by much better men than I: they have talked about it at great length but rarely have they succeeded in distilling their ideas to produce a formula or a specific set of rules for its most effective application.

I am sure, Gentlemen, that during the three years you have been training here at the School of Infantry you have noticed that we are applying ourselves to developing this all-important quality in you. I do not profess to have found the ultimate

solution to the problem of developing this quality in each potential officer who passes through my command. Nevertheless, I have come to certain conclusions with regard to developing leadership ability in those who attend courses at this School. The training sequence I have developed exposes the future officers of the Regular Army to problems and situations where they must make the best use of their own inner capabilities in order to solve them. You certainly could not help but notice that we do not teach leadership only through the medium of lectures and that we have come to the conclusion that leadership is instinctive and can be reduced to a list of "do's" and "don'ts". I will come back to these in the last part of my talk.

We cannot touch the heart of this talk without defining the word "LEADERSHIP". What does it mean? Personally, I believe that Leadership is the art of influencing others to do willingly what is required in order to achieve an aim or goal.

Of course this definition is quite broad and general. It can include what may be described as autocratic or democratic leadership; as intellectual, artistic, scientific, religious or military leadership or a face-to-face relationship in which one man directs, guides and inspires the activities of others in some special way towards the attainment of a set goal. True military leadership exists when one man imposes his will upon a

**This is the text of a lecture delivered by Colonel Dextraze to the 1959 graduating class (Regular Officers Training Plan) on completion of their Phase 3 training at the Royal Canadian School of Infantry.—Editor.*

group of men in such a manner as to command their immediate obedience, their confidence, their respect and loyal co-operation to a point where these men will work instinctively as a team to achieve the desired objective. I am convinced that the ultimate in leadership in peacetime or in battle is the domination of the mass by the personality of the leader.

It is therefore obvious that to succeed, the would-be leader must possess certain qualities. An individual does not become a leader merely by virtue of the rank or appointment he may hold—far from it. Real determination and constant application to the fulfilment of one's duty are required.

I believe it is important for you to remember that in any field of endeavour, the leader must never forget the position he occupies and what he in fact represents. He must be worthy of the qualification with its attendant responsibilities. For instance, you, as officers of the Regular Army, by virtue of your commission, represent the Queen and the Government of Canada. Therefore, to be a true military leader you must possess certain basic qualities. Some of these must be highly developed, others may only be required to a lesser degree but they are all needed and if practised, will make you the leader your country needs.

Let us have a look at some of the qualities a leader must possess. To begin with, I think that the most important of these are loyalty, knowledge, integrity and courage.

Loyalty

You must be loyal in two ways. First, you must be loyal to your Sovereign and Government through the Army which is an instrument of the Government, and maintain this

loyalty regardless of the individuals who hold office. Secondly, you must be loyal to your subordinates—and do not forget that they will be loyal to you to the same degree to which you display your loyalty to them and your own immediate superiors. Loyalty demands that you forsake personal pleasures if they conflict in any way with the performance of your duties. You have no right to take time off for amusement tonight if you should use this time to prepare for tomorrow's task. In the immediate future you will be given a platoon of men to look after, and look after them you must in every way. The demands on you will be great. The greatest task will be to maintain a delicate balance between satisfying the demands made on your loyalty to your superior and at the same time that which you owe to your platoon.

Knowledge

You must possess knowledge if you are to be efficient. If you have knowledge you will command respect not only from your subordinates but from your superiors. You must never stop learning and you must never pretend to anyone that you know something when in fact you do not. On the contrary, it is often best to admit your ignorance on a certain point under discussion and encourage whoever is speaking to you to clarify this particular subject further. In so doing you will be learning something new and making yourself more acceptable to those near you.

As you progress in rank, there will be a tendency to neglect certain matters but you must always set aside time to study them. This tendency will come naturally, as with rank you will have more privileges and more assistants to do things for you. Do not be fooled by this set of

circumstances and excuse your laziness to come to grips with the detail of problems by saying, as we often hear: "I am far too busy to deal with these details", "Why should I bark when I have dogs that can bark for me", "I cannot let myself get emotionally involved in this matter", and so on. Instead, remember that to lead you must know what you are talking about and in order to do so, you must study a problem with every means at hand.

Too many people believe that setting aside time to study as one did as a student at school is old fashioned. Military leadership without knowledge never has been and never will be truly successful. In the Second World War, Adolf Hitler decided to take personal command of his General Staff and autocratically direct the course of military operations. His ego was such that he believed he had the capabilities and the knowledge to successfully plan and direct the war. He thought that because of his high position he knew all the answers, forgetting that he had never set aside time to study the art of warfare. Hence, the German Army was defeated by following the plans of an amateur.

Do not be under the impression, Gentlemen, that as you grow in rank, a piece of grey matter proportionate in size to the star put on your shoulder is automatically inserted in your head. This just doesn't happen. You may be given more authority by promotion, but you are not by the same act given additional knowledge or ability. These you acquire yourself through study and application, and this is not easy nowadays.

Integrity

Integrity means the refusal to deceive others in any way, shape or

form no matter what the circumstances. The leader must take decisions and accept their results. He is the one responsible for the success or failure of his own actions. He must admit his mistakes to himself, at least, and profit by them. The leader does not try to bluff his way through or shake his responsibility off onto others. Never be afraid or ashamed to recognize your errors. You will not truly lose face by so doing. On the contrary, your subordinates will conclude that you have acted as an honest human being who has confidence in his own ability.

Courage

I would define true courage in battle as the complete awareness of the degree of danger that exists and the desire or at least the willingness to face it. I have heard many people claim that the man who is courageous suffers no fears. I believe that if this were true one could hardly be called courageous. I believe rather that courage is a quality of the mind which makes one refuse to be swayed from his aim by danger or difficulty. To me it is a quality which forces a man to marshal all his abilities and powers to overcome the hardships standing in his path. I am positive that perseverance is the heart of courage. To sum up what I have said, I believe that the courageous man is one who has succeeded in mastering his emotions and weaknesses.

The courageous leader may consider the result of his action but that must not stop him or allow it to sway him in his judgement in doing what he thinks must be done. Our modern civilized way of living affords the soldier very few opportunities to test his courage. However, in peace-time as well as in war, opportunities exist for the development

of a strong personality. These strong personalities, much needed in war, should not in peace-time be stifled; rather, they should be moulded, developed and allowed to mature. You may often be accused, when you believe that you are acting in the best interests of the Service, of "rocking the boat", of acting rashly through inexperience. To some degree, this may be true as your enthusiasm will disturb the somnolence of others; however, it is better to act if you feel you are in the right than to sit back and leave a situation unsolved. Some time ago I had occasion to talk with a number of businessmen who remarked that "Indecision" at the top level of management was the most serious sickness now affecting the business world. The remark had a serious effect on me and after some considerable thought, I resolved that this "malady" was not peculiar to the field of business. In fact, this lack of decision at the required level, which in the final analysis is caused by lack of courage, is responsible for many of the problems of the world of today.

You may be taken to task for the inevitable mistakes you make in such a course of apprenticeship as a leader; but although you can incur the anger of your superiors, you will never fail to gain their respect if you can prove to them that you are honestly acting in the best interests of the Service. Similarly, you must look for and recognize this very same trait in your subordinates and apply yourselves to harness it for the success of the cause.

I could mention many other qualities inherent in leadership which are no doubt important, but in my opinion those I have just mentioned are the most vital ones. If you are loyal,

and possess knowledge, integrity and courage, you will have the basic qualities required by a leader in any field of enterprise, particularly in the Canadian Armed Forces.

The success of an operation undertaken by a leader will not only depend on his capacity to lead but also on his sense of fairness. In any position of leadership or management of others, there arises the need for praise or criticism, commendation or rebuke of subordinates before the highest standard of group performance can be reached. Remember that when either rewards or punishments are required in your platoon, you must give them with impartiality and they must be merited. You will often, as leaders, have to pass judgement on your subordinates and when you are in such a position remember that you are judging another human being and that your judgement must be tempered by the circumstances. For example, a first offence is not as serious as an oft-repeated one. And when praise is due, do not reward a trifle, or commend routine well done.

In my position as Commandant of the School of Infantry responsible for conducting the course you have just completed, it is my duty to develop qualities which everyone of you possesses in some degree so that you may meet the condition of the world you will face tomorrow, perhaps alone with little or no guidance. And, Gentlemen, I am daily reminded of my tasks by the sight of my four sons whom you may one day be commanding in the face of the enemy. Therefore, I feel it is essential that I tell you that when disciplinary action is required in your command, you should make sure you do not administer it in anger or with a sense of annoyance or irritation, but with

the full consideration of justice and the judicious application of the corrective measures at your disposal. This does not apply only to officers of Her Majesty's Forces: it applies also to everyone concerned with the management of men.

I have known of officers too concerned about their popularity with their troops. Remember that in order to be a good leader you do not necessarily have to be the most popular man in your unit and always pleasant with others. On the contrary, successful leadership means the recognition of what is good and what is bad alike and it will not be effective if either factor is overlooked. When you are in command of your platoon, do not overlook faults or omissions because you find the rendering of disciplinary action distasteful. You must possess the moral courage to apply discipline when necessary, and in taking disciplinary action do not forget that you may have to cancel privileges or impose sanctions or take even stricter measures. You may also have to combine these elements to make the punishment fit the crime. Never forget punishment without constructive or corrective measures is seldom effective and is never conducive to lasting satisfactory performance. When you take disciplinary action you must have only one aim in mind and that aim should not be the satisfaction of your ego or certain written regulations; it must be to make your men better all-round soldiers.

Now that you are leaving the School of Infantry, you will be called upon to practise leadership in the true sense of the word. Make no mistake about the fact that it is not always a picnic; it is both arduous and exacting.

If you demand much of your men you must be prepared to give in greater amounts. The true leader knows all of the standards required by the authority he represents and much of the dispositions of those to whom he answers. He also knows the dispositions, characteristics and capabilities of his team. He is the intermediary who interprets between these elements in terms of the finished product. The quality of your platoon will be determined by your ability to conceive ideas or interpret them, motivate your subordinates, lead them and supervise them.

At the moment when so much is happening in the world, military leaders at all levels have to understand, cope and live with the implications of external conditions affecting the people they are leading. Today's world is unsettled and complex; economical and social conditions influence both military and governmental leaders. Look at what is going on in the world today. In particular look at those areas where millions of people have for centuries accepted life as their destiny, who suddenly, because they have seen a bit of the modern way of life, feel the urge, the compelling desire to completely change their concept or mode of life which endured for centuries. It is *now*, Gentlemen, that you must train yourselves to give deep and thoughtful consideration to external conditions affecting the internal management of our military operations. This in fact is a demanding phase of leadership in the difficult times we are passing through. Nevertheless, prepare yourselves to understand and to interpret, and guide your operations accordingly. If you do this, I am sure you will taste success.

Read and keep abreast of what is

happening in the world. Be on the lookout now to avoid being trapped and forced to follow the policy of "something for nothing". This you can do without too much difficulty if you are prepared in both thought and deed to do your share in your own particular field.

You may know, but let me remind you that there is no shortage of young men in this country who, being well coached, can develop into outstanding leaders; however, there is already a shortage of truly developed leaders. This, in my opinion, is due to the fact that many fail to contribute properly to the development of men. Be careful not to be found wanting in this field.

You must, as leaders, no matter at what level you work and in particular at the level of platoon commander, apply yourselves to select, train and develop the young people, your subordinates, to cope with the military, social and economical changes facing Canada at the moment. The training and development of a soldier into a junior leader is a time-consuming job, and to train him to become a leader it is necessary to know, understand and get to like him and also feel duty-bound to prepare him for successes equal to the potential of his talents.

Next month, next year, when you have command of your very own platoon, you should organize your work in such a way that you can move around your command so that you can watch your men function in training under your subordinate leaders, and be able to counsel them and get to know them better as individuals. If you are really interested in your job, you will have no time to worry about your own security or advancement, which is often the reason why the soldier is left to his own

resources, seeing his commander only when a rebuke has to be delivered.

While it is true that there is no "magic system" to develop leaders, you will soon be faced with this task. Of course this must be the concern of all of us and it must start at the very top. Whenever you have the occasion, you must persistently press this point home. You will be told "Watch the man management in your platoon", or "Your junior leaders are not good—do something about it". Many more such remarks will be your lot. Do not allow yourself to be rattled by them or your confidence in your own ability to be shaken. Stop and think; remember your own training and solve your immediate problems by accepting such counselling as will help you prepare a better plan of action to develop leadership in your subordinates.

In a matter of a few weeks you will be gone from this School and this is my last opportunity to speak to you as a group before you actually take over the command of troops. Therefore, I would like to end my talk by passing on to you some tips which may help you in your work.

1. When you are finally in the position where you have to give commands, make sure you use a tone of voice which indicates without doubt that you expect your order to be executed. Look at your men straight in the eye, use simple words and be definite. It is not necessary to shout, but it is necessary that you have something to say before you open your mouth.

2. Do NOT coax your men into obeying your order. On the other hand, do not club them into it.

3. Do not flatter your men—there is nothing more disgusting to men

than an officer who has to use flattery to get his orders obeyed.

4. Avoid being sarcastic when you talk in a serious vein.

5. Do NOT put yourself in a position where you have to wave your rank under a man's nose to make him obey you. It is better to use the proper approach, tone of voice, etc., which will give the man the feeling of "Let's go and do it". One way to avoid placing yourself in a bad light is by making sure the order you wish to give is lawful.

6. Be proud of your rank and achievements. Be proud of your unit and of the formation to which you belong.

7. Do NOT criticize your seniors or the Army when you have nothing constructive to say about them. Keep your mouth shut instead. If you feel you must speak, be sure of your facts and be sure it will be profitable to the organization.

8. Show your men you have confidence in their ability to perform tasks, and avoid riding them.

9. Accept the responsibility and blame when your platoon has NOT carried out the plan as it should have. Never shift the blame to subordinates under your command.

10. Never end an order with a threat. You are the platoon commander and it goes without saying that because of the authority vested in you, you can apply sanctions if you so wish.

11. Do not be afraid to recognize in public the good points you have noticed in one of your subordinates. Always give credit where and when it is due. If you use someone else's plan or ideas, recognize the fact.

12. If you have to reprimand, do it in private unless it is for the good of the group to do so publicly.

13. When you have to apply disci-

pline, be satisfied that your actions are justified by the nature of the crime and the circumstances that prevailed at the time of the offence. Be humane, impartial, unprejudiced.

14. Be proud of the discipline which governs your actions and make sure your men also are.

15. Cultivate the habit of ready and immediate obedience to orders and ensure that your subordinates react similarly.

16. Always be interested in the promotion and advancement of your juniors. Be interested in their personal problems and help settle them through sound counselling. Nothing annoyed me more when I had my own platoon than to hear of some man's problems through outside sources. So it is your job to make sure they turn to you first with their problems.

17. Be careful of your conduct, bearing, dress, relationships.

18. Do NOT abuse your privileges: in fact, leave a margin as an insurance, otherwise you may stretch their use over the permitted limit. Remember whatever example you set to your own men will be imitated by them.

19. During training, train your men to the limit of their mental and physical capabilities. Make sure that you participate in this training. Make sure when your NCOs are conducting training that you supervise them well. Do NOT lead by remote control.

20. Never take matters for granted. Check and double-check at all times.

21. Do NOT waste time. Plan your work. As far as avoiding waste of time and effort during war is concerned, there is a battle procedure in force in units. You must invent your own working and training proce-

dures for the good of your command. When I was a student I had a professor who drummed into our heads the following adage expressed by Boileau in his "Art poetique": "Ce que l'on conçoit bien s'énonce clairement, et les mots pour le dire viennent aisément", which, expressed in English, means "What is accurately thought out is clearly expressed and the words to say it come easily."

22. Show initiative, and always carry out orders to the letter. When in training or operations, make sure you lead your men conscientiously. Make sure now that you can forget yourself entirely in favour of your mission and your men tomorrow. You will be able to lead men in war in the proper fashion only if you have in peace-time practised yourself to that end.

The war of the future, in my own personal opinion, will require of soldiers of all ranks a maximum of knowledge, initiative and leadership ability. You can see this yourself by studying the many battlefield troop postures. It is evident that you will often have to fight your own battles with a minimum of supervision and guidance; you will be away on your own and the decision will be yours only. It is therefore imperative that you prepare yourself for this eventuality.

Being an efficient leader may appear, superficially at least, a lonely business. Some do believe it is. Personally, I do NOT consider that be-

ing a *leader of men* is a lonely job, inasmuch as the infinite satisfaction of accomplishment that ensues is the ultimate in reward. And remember that an honest leader leaves numerous living monuments in the form of leaders he has helped to develop and guide, who in part at least, reflect the guidance and man management to which they have been exposed. I often think that were it possible to infuse someone with all the qualities of good leadership, the pursuit of developing leaders would probably lose some of its zest. The fact remains that good qualities of any description can only be achieved through hard work, diligence and sacrifice. If any or all of these elements characterize your leadership while in command, you can, with your head high, take your place with those who have gone before and left their mark, and I am thinking of Montgomery, Simonds, Eisenhower, Rommel and many others.

What is more, you will be able to look back on a job well done.

In conclusion, I would like to say that the leaders of today and, more so, the leaders of tomorrow, must possess in a large measure all of the qualities which I have elaborated on earlier. You must possess the knowledge of your job to perfection. Set yourself a high standard of self-discipline; be bold, courageous and above all, today in peace-time, dedicate your life to your job no matter where or when you may be called upon to serve.

The best of luck to you.

One More Altar

Let us add one more altar—to the Unknown Leader—that is, to the good company, platoon or section leader who carries forward his men

or holds his post, and often falls unknown. It is these who in the end do most to win wars.—*Field Marshal Wavell.*

SOVIET CIVIL DEFENCE AGAINST CBR ATTACK

Digested by the *Military Review* (U.S.) from an article in the
Armed Forces Chemical Journal, May-June 1959

The wholehearted support the USSR demands of her people extends to civil defence, including defence against chemical, biological, and radiological (CBR) attack. While we in America content ourselves with infrequent passive air raid and evacuation drills, the Soviet Union has many millions of her citizens of both sexes organized into well-trained groups who can, at a moment's notice, come to the defence of every city, town, village, and hamlet — indeed, every individual dwelling. The vast Soviet civil defence system embraces the entire country. And while we disbanded our volunteer air raid warning system immediately after World War II, the Soviet Union's civil defence system has grown and kept active in the post-war period.

Soviet authorities are convinced that CBR weapons will be used in future wars. Alleged bacteriological warfare in Korea inspired a number of Russian books, articles, and pamphlets on the subject. For propaganda purposes and perhaps to justify their own preparedness for CBR warfare, the Soviets have continued to fabricate accounts that the Free World has resorted to chemical warfare in other areas.

Active Defence

Active civil defence of the USSR against CBR attack by enemy aircraft is provided by the Active Defence Group (PVO). Under the control of PVO, a network of aircraft warning posts stretches across the Soviet Union. These posts, from

which watchers scan the skies day and night, are known as Air Observation and Warning Stations (VNOS). Fighter planes and anti-aircraft guns stand ready to go into action. In any attack some enemy aircraft undoubtedly will break through to attack populated centres. At this time the Soviet passive civil defence system goes into action.

Passive Defence Organization

Passive civil defence is under the nationwide Local Air Defence Group (MPVO). All "national-economic installations" have MPVO groups. These groups are organized into teams of specialists trained to handle warning and communications, fire defence, first aid, CBR defence, shelters and covers, order and security, blackout, and — in farming areas—veterinary services.

Small institutions, schools, apartment houses, and groups of dwellings have MPVO "self-defence groups" which perform the same functions as the MPVO units in the larger installations. Special groups of Local Air Defence Squads (*Komandy*) are equipped with dosimeters and inspect damaged areas after attack to determine the degree of CBR contamination and to mark off contaminated areas.

MPVO draws support from many other organizations, including the All-Union Voluntary Society for Co-operation with Army, Air Force, and Navy (DOSAAF), a society of over 30 million members from all walks of life and the principal

means by which *MPVO* carries on passive civil defence training. With Stalin as its prime mover, *DOSA AF* was created in 1951. Its director is army Colonel General Pavel Belov.

The fourth *DOSA AF* convention, February 1958, resolved that the most important task of the society was to train the entire population for defence against atomic, biological, and chemical attack. Responsibility for this training was assigned to the Anti-chemical Defence Group (*PVKhO*) in each of the primary *DOSA AF* organizations. *PVKhO* groups are instructed and trained by reserve and retired chemical service officers and by engineers, chemists, teachers, and medical personnel selected by *DOSA AF*.

Incentives

DOSA AF strives to make all civilians from 16 years of age eligible to wear the "Ready for *PVKhO*" badge. To be awarded this badge, a Soviet citizen must complete a programme in which he receives 20 hours of CBR classroom instruction and engages in outdoor training in CBR decontamination, constructing slit trenches, administering first aid, and extinguishing incendiaries and fires caused by them.

To pass the examination he must have some knowledge of the kinds and effects of CBR weapons and of the methods of protection against them. He must learn to use the protective mask and clothing, be acquainted with anti-chemical equipment in the shelter, be able to utilize available equipment for traversing contaminated areas, and have some knowledge of hermetic sealing of water and food. He must know the rules to be observed when *MPVO* warning signals are given, and the way the population is to conduct it-

self in a contaminated area. He is even taught veterinary treatment of animals.

Training

In one exercise, *PVKhO* trainees responded to a night "chemical alert" alarm and went on a 20-kilometer march during which they wore protective masks for three kilometers. In order not to interfere with the working hours of the group, this particular exercise began Sunday at 0200 and ended at 0900. Another *PVKhO* exercise involved a 35-kilometer ski run in the dead of winter with protective masks worn for five continuous kilometers.

PVKhO groups are taught to expect chemical attack by airplane spray, chemical bombs, and artillery shells. They are told that bacteriological attack may be indicated by an aerosol spread by low-flying aircraft and that bacteriological warfare (BW) agents may be disseminated by rockets, bombs, shells, and by aircraft dropping boxes or packets containing infected rodents or insects. They are schooled in the measures against enemy overt or covert use of BW agents.

PVKhO instructors use textbooks such as the *Training Manual for Local Air Defence*, a 200-page profusely illustrated work published in 1956. It describes the following: Characteristics and effects of lewisite, hydrocyanic acid, tabun, cyanogen chloride, phosgene, diphosgene, chloracetophenone, and adamsite; methods of disseminating chemical agents; physical principles of atomic weapons, the destructive "factors" of an atomic explosion, and combat radioactive substances; bacteriological agents and the diseases caused by them. Obviously seeking to create

the impression that the USSR is innocent of all BW activity — if not knowledge of the subject — the manual declares that its information on BW is derived from "foreign published data." The manual also deals with CBR decontamination, with "measures to eliminate the after-effects of bacteriological attack", and with protection of the skin, foodstuffs, forage, and water against chemical agents. Most Soviet books on the subject of civil defence are printed for mass consumption and are issued in the millions.

Nor do the Soviets permit those trained in civil defence to forget what they have learned. Aware that civil defence training, particularly against CBR, is forgotten in time, DOSAAF conducts refresher courses every two years. Citizens who have acquired "Ready for PVKhO" badges must pass examinations regularly to retain them.

Protective Shelters

Little information is available on shelters in the USSR. Chemical defence shelters were used in World War II. Since the end of hostilities, apartment and office buildings have been erected over reinforced basements that furnish protection against chemical and atomic attack. The Soviets certainly are aware of the value of shelters and may be providing for them actively. A civil defence manual implies that shelters are available. It declares that:

A simultaneous protection of a large number of people from the effects of a shock wave of demolition and atomic bombs, light radiation, penetrating radiation, and toxic substances is ensured by collective means of protection—shelters and other protective installations of MPVO.

The DOSAAF's biweekly Soviet

Patriot on 18 March 1957 announced a new film, "Civil Defence Against Atomic Warfare", which presented shelters in homes and subway stations; methods of constructing sheltered passages, dugouts, and galleries; and other "collective and individual means of defence against atomic attack".

"Services" under the chief of a *rayon* (local urban or rural area) or city MPVO group include a shelter and cover service that provides the population with necessary shelters and covers, and controls shelter construction.

Special attention is given to organizing the population for defence against atomic attack. DOSAAF has formed Atomic Protection Circles (PAZ) of 20 to 25 members who receive training in atomic defence two hours weekly. The Union of the Red Cross and Red Crescent Societies (*Soikk i KP*) assists DOSAAF in training members of PAZ to familiarize the population with atomic weapons, individual and collective defence against atomic attack, first aid for atomic attack casualties, and the action taken on sounding of MPVO signals. Members of the All-Union Society for the Promotion of Political and General Sciences organize lectures and scientific reports on atomic weapons and atomic defence to increase the skill and knowledge of PAZ members.

PAZ members, who also train the population in BW defence, give considerable attention to instructing the Soviet people in self-decontamination after a nuclear attack. They are taught to carry out partial decontamination—that is, washing all exposed parts of the body—as soon as possible after leaving the stricken area. They are to receive complete

decontamination at public bathing installations with the help of medical personnel and are then to be given a dosimetric test.

Chemical Warfare Defence

The Soviet population also is thoroughly organized for defence against chemical warfare (CW) attack. On warning of a toxic CW attack, all *MPVO* units in large installations and all self-defence groups carry out *MPVO* measures in their immediate areas to include emergency decontamination by six-man decontamination squads pending arrival of *PVKhO* decontamination details. Medical squads trained by the Union of the Red Cross and Red Crescent Societies carry toxic agent casualties to decontamination stations.

The Russian people are instructed to have protective masks, capes, socks, and gloves in readiness for protection against CBR attack. Using visual aids displayed throughout the country from propaganda trucks *DOSAAF* instructors remind the population that these items of protective equipment are to be donned at the first warning of an attack. It may be questioned, however, whether the Soviet people are adequately supplied with protective equipment; for although protective masks are sold by *DOSAAF* stores everywhere in the USSR the people may be reluctant to purchase them because of their cost—the equivalent of 14 dollars, or 10 per cent of an average Russian's monthly income. It is also likely that, because of indifferences to civil defence, many Soviet citizens may not purchase available protective equipment. But such equipment is maintained in office buildings, factories, tractor stations, and key installations where primary *MPVO* units are organized.

Fight Against Indifference

Soviet propagandists conduct an incessant campaign against the indifference of the population to civilian defence. This propaganda seeks to motivate zealous participation in civil defence activities by instilling fear or enthusiasm in the masses. Curiously inconsistent with the policy of minimizing the dangers of atomic warfare, the campaign seeks to frighten the Russian people by reminding them that they are constantly threatened by the "capitalistic warmongers" who may attack the USSR at any time—and with CBR weapons.

Active participation also is encouraged through a system of awards, badges, and citations. It must be remembered that to be socially acceptable a Soviet citizen must participate in as many community activities as possible. The extent of his participation will, in part, determine his opportunities for promotion on his job and will offer him other rewards—for example, scholarships. By badges indicating his community achievements and by "performance reports" posted by the chairman of the committee of a primary *DOSAAF* organization, which keeps careful records of its members, a citizen gives proof of loyal service to the community.

In addition to the "Ready for *PVKhO*" badge, every *DOSAAF* member is expected to earn the "Ready for Work and Defence" badge which, worn by a student, housewife, teacher, artist, or scientist, is evidence that its wearer is ready to work for the defence of the USSR.

Civil defence must have mass participation to be effective. On this score the USSR is reasonably successful.